AF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	David P. Gendron, et al.	Confirmation No.	3912
Serial No.:	09/911,846	Examiner:	Kim T. Bui
Filed:	July 24, 2001	Art Unit:	3626
		Docket:	750.0030001

Title: ASSET COMMUNICATION FORMAT WITHIN A COMPUTER NETWORK

MS APPEAL BRIEF-PATENTS
Commissioner for Patents
P.O. BOX 1450
Alexandria, VA 22313-1450

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Date:

-Docket No.: 750.0030001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
David P. Gendron, et al.

Application No.: 09/911,846 Confirmation No: 3912

Filed: July 24, 2001 Art Unit: 3626

For: Asset Communication Format Within A Computer Network Examiner: Kim T. Bui

APPELLANT'S BRIEF

MS Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This brief, in compliance with 37 C.F.R. § 41.37, is in furtherance of the Notice of Appeal filed under 37 C.F.R. § 41.31 on July 13, 2006.

The fees required under § 41.20(b)(2) and any required petition for extension of time for filing this brief and fees therefore are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37:

I. Real Party in Interest

II. Related Appeals and Interferences

III. Status of Claims

IV. Status of Amendments

V. Summary of Claimed Subject Matter

VI. Grounds of Rejection to be Reviewed on Appeal

VII. Argument

VIII. Claims Appendix

IX. Evidence Appendix

X. Related Proceedings Appendix

The final page of this brief bears the attorney's signature.

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is Acuo Technologies, LLC a corporation established under the laws of the State of Minnesota and having a principal place of business at 7200 Hudson Blvd., Suite 230, Oakdale, Minnesota 55128.

II. RELATED APPEALS AND INTERFERANCES

Appellant is unaware of any related appeal or interference.

III. STATUS OF CLAIMS

The Claims 1-19 are pending. No claims are allowed. Claims 1-19 stand rejected and are the subject of this appeal.

IV. STATUS OF AMENDMENTS

Appellant filed a Response after Final Rejection on May 3, 2006 (hereinafter "Final Response") with no claims amended, added, or cancelled. The Examiner responded to the Final Response with an Advisory Action mailed June 13, 2006.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 1

Independent claim 1 recites a computer-readable medium having a storage asset (page 2, lines 13-17; page 15, lines 10-13, Figure 8). The storage asset includes a first data structure that stores asset meta information (page 15, lines 11-15; page 16, line 9 to page 18, line 4; abstract; Figure 8) to control routing of the asset through a medical imaging network (page 2, lines 17-19); a second data structure that stores medical imaging information (page 15, lines 10-12, line 15-18; page 18, lines 6-20; abstract; Figure 8) received from a medical imaging modality (page 2, lines 19-20); a third data structure that stores pixel data (page 15, lines 10-12 and 19-23; page 18, lines 22-25; abstract; Figure 8) received from the medical imaging modality (page 2, lines 20-21); a fourth data structure that stores patch data (page 15, lines 10-13; page 15, line 24 – page 16, line 5; page 18, lines 26-33;

abstract, Figure 8) that includes modifications to the medical imaging information (page 2, lines 21-22); and a fifth data structure that stores error detection and correction information (page 2, lines 22-23; page 15, lines 10-13; page 18, lines 5-7; abstract; Figure 8).

The first data structure stores asset meta information (page 15, lines 11-15; page 16, line 9 to page 18, line 4; abstract; Figure 8) that controls routing of the asset through a medical imaging network (page 2, lines 17-19). So, for example, the first data structure includes some of the routing information necessary for a router to route the asset within a system (page 15, lines 14-15). In a DICOM environment, the first data structure documents ownership and version control, and provides a mechanism to gain efficient access to other parts of the format.

The second data structure stores medical imaging information (page 15, lines 10-12, line 15-18; page 18, lines 6-20; abstract; Figure 8) received from a medical imaging modality (page 2, lines 19-20). The medical imaging information can include raw data received from the modality that describes a recent examination, including the patient information, session information, study information and image information (page 15, lines 15-17). Medical imaging information may include, for example, related DICOM tags and messages (page 15, lines 17-18).

The third data structure stores pixel data (page 15, lines 10-12 and 19-23; page 18, lines 22-25; abstract; Figure 8) received from the medical imaging modality (page 2, lines 20-21). Pixel data can include the medical images generated by an examination (page 15, lines 19) and include a DICOM data tag that designates the pixel data of the DICOM image(s) (page 18, lines 22-25).

The fourth data structure stores patch data (page 15, lines 10-13; page 15, line 24 – page 16, line 5; page 18, lines 26-33; abstract, Figure 8) that includes modifications to the medical imaging information (page 2, lines 21-22). The patch data includes modifications to medical imaging information, which was originally generated by a source modality (page 15, lines 24-25). The original data is not modified, rather the asset includes the patch data that stores all of the updated data and, in particular, a revision history including the date and time of the changes, and the operator that made the change (page 15, lines 26-28). So, the updates and

modifications of an asset are stored in the patch data (page 15, lines 28-30). When viewed on a view station, the patch data overrides the medical imaging, but the operator may view the revision history and the original medical imaging data (page 16, lines 3-5).

The fifth data structure stores error detection and correction information (page 2, lines 22-23; page 15, lines 10-13; page 18, lines 5-7; Abstract; Figure 8). The error detection and correction information can include additional data useful for detecting changes to data encapsulated by an asset, or errors during transmission (page 16, lines 5-7).

Dependent claim 2

Claim 2 is a dependent claim on independent claim 1 that recites that the medical imaging information includes patient information, session information, study information and image information (page 15, lines 14-17).

Dependent claim 3

Claim 3 is a dependent claim on independent claim 1 that recites that the medical imaging information includes Digital Imaging and Communications in Medicine (DICOM) tags and messages (page 15, lines 17-18; page 18, lines 6-12).

Dependent claim 4

Claim 4 is a dependent claim on independent claim 1 that recites that a fourth data structure that stores thumbnail data generated from the pixel data (page 15, lines 19-23, Figure 8).

Dependent claim 5

Claim 5 is a dependent claim on dependent claim 4 that recites that the thumbnail data includes a low-resolution version of the pixel data and is generated by a router within the medical imaging network (page 15, lines 19-20).

Dependent claim 6

Claim 6 is a dependent claim on independent claim 1 that recites that the patch data includes, for each modification, a revision history having a date, a time, and an operator associated the respective modification (page 15, lines 24-30).

Dependent claim 7

Claim 7 is a dependent claim on independent claim 1 that recites that the error detection and correction information comprises a cyclical redundancy check (CRC) (page 16, lines 5-7).

Independent Claim 8

Independent claim 8 recites a method that includes storing routing information mapping destinations to routes within a network (page 6, line 16 – page 7, line 10; page 12, lines 5-8; page 15, lines 14-15); receiving a storage asset comprising: (i) asset meta information (page 15, lines 10-12; page), (ii) original medical imaging information received from a medical imaging modality (page 15, lines 10-18; page 16, lines 3-5), and (iii) patch data that includes modifications to the medical imaging information (page 2, lines 21-22; page 15, lines 24-30; Abstract); selecting a route from the routing information based on the asset meta information (page 2, lines 15-19; page 15, lines 10-15; page 19, lines 1-10); and forwarding the storage asset according to the selected route (Figure 4, page 12, lines 9-15).

Dependent claim 9

Claim 9 is a dependent claim on independent claim 8 that recites that the storage asset further comprises pixel data received from the medical imaging modality (page 2, lines 20-21; page 18, lines 22-25).

Dependent claim 10

Claim 10 is a dependent claim on independent claim 8 that recites that the storage asset further comprises error detection and correction information (page 2, lines 22-23; page 15, lines 10-13; page 18, lines 5-7; Abstract; Figure 8).

Dependent claim 11

Claim 11 is a dependent claim on independent claim 8 that further includes storing a set of routing rules (page 8, lines 17-21; page 12, lines 5-8);

comparing a portion of the medical imaging data or a portion of the patch data to the set of routing rules (page 8, lines 22-31; page 12, lines 9-15); and

selecting the route from the routing information based at least on a result of the comparison (page 2, lines 15-19; page 8, lines 22-31; page 12, lines 9-15; page 15, lines 12-15).

Dependent claim 12

Claim 12 is a dependent claim on independent claim 8 that recites that the asset meta information comprises a target Application Entity Name (AEName), and further wherein storing routing information comprises storing routing information mapping AENames to routes within the medical imaging network (page 6, line 25 – page 7, line 12; page 19, lines 1-10).

Dependent claim 13

Claim 13 is a dependent claim on dependent claim 12 that recites that wherein selecting a route from the routing information comprises comparing an AEName within the storage to the AEName within the routing information (page 6, line 25 –page 7, line 12; page 19, lines 1-10).

Dependent claim 14

Claim 14 is a dependent claim on dependent claim 11 that recites that the storage asset further comprises thumbnail data generated from the pixel data (page 15, lines 19-23, Fig. 8).

Dependent claim 15

Claim 15 is a dependent claim on dependent claim 11 that recites that the thumbnail data includes a low-resolution version of the pixel data and is generated by a router within the medical imaging network (page 15, lines 19-20).

Dependent claim 16

Claim 16 is a dependent claim on dependent claim 11 that recites that the patch data includes, for each modification, a revision history having a date, a time, and an operator associated the respective modification (page 15, lines 24-30).

Dependent claim 17

Claim 17 is a dependent claim on dependent claim 12 that recites further including updating the medical imaging information based on the patch data to form a corrected medical imaging information (page 15, lines 10-13; page 15, line 24 – page 16, line 2); and displaying the corrected medical imaging information on a diagnostic view station (page 16, lines 3-5).

Independent Claim 18

Independent claim 18 recites a router that includes a computer-readable medium storing routing information mapping destinations to routes within a medical imaging network (page 6, line 16 – page 7, line 10; page 12, lines 5-8; page 15, lines 14-15) and a routing module to route a storage asset (page 6, lines 16-24; page 9, lines 12-20; page 10, lines 16-20; page 11, lines 10-15). The storage asset include (i) asset meta information (page 15, lines 11-15; page 16, line 9 to page 18, line 4; abstract; Figure 8), (ii) original medical imaging information received from a medical imaging modality (page 15, lines 10-18; page 16, lines 3-5), and (iii) patch data that includes modifications to the medical imaging information (page 2, lines 21-22; page 15, lines 10-13; page 15, line 24 – page 16, line 5; page 18, lines 26-33; abstract, Figure 8), where the routing module selects a route based on the asset meta information and the routing information (page 2, lines 15-19; page 15, lines 10-15; page 19, lines 1-10).

Dependent claim 19

Claim 19 is a dependent claim on dependent claim 18 that recites that the asset meta information comprises a target Application Entity Name (AEName), and further wherein the routing information maps AENames to routes within the medical imaging network (page 6, line 25 –page 7, line 12; page 19, lines 1-10).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The first issue is whether claims 1, 2, 8-13, 18-19 are unpatentable under 35 U.S.C. § 103(a) as anticipated by U.S. Patent No. 5,642,513 to Schnellinger et al. (hereinafter "Schnellinger").

The second issue is whether claims 3, 17 are unpatentable under 35 U.S.C. § 103(a) over Schnellinger as applied to claims 1, 12 above and further in view of Pourjavid (U.S. Patent No. 5,883,985).

The third issue is whether claims 6, 16 are unpatentable under 35 U.S.C. § 103(a) over Schnellinger as applied to claims 1, 12 above and further in view of DeLaHuerga (U.S. Patent Publication No. 2002/0116509).

The fourth issue is whether claims 4, 5, 14, 15 are unpatentable under 35 U.S.C. § 103(a) over Schnellinger as applied to claims 1, 12 above and further in view of Zandi et al. (U.S. Patent No. 6,195,465).

The fifth issue is whether claim 7 is unpatentable under 35 U.S.C. § 103(a) over Schnellinger as applied to claims 1, 12 above and further in view of Booth et al. (U.S. Patent No. 6,065,073).

VII. ARGUMENT

Claims 1, 2, 8-13, 18-19

Claims 1, 2, 8-13, 18 and 19 were rejected under 35 USC § 103(a) as being unpatentable over Schnellinger. Applicant respectfully traverses the rejection of claims 1, 2, 8-13, 18 and 19.

Claim 1

Applicant respectfully submits that Schnellinger does not support a proper prima facie case of obviousness for the rejection of claim 1. For example, Schnellinger does not teach or suggest all the elements recited in claim 1. In addition, Applicant respectfully submits that the Examiner has not properly supported an inherency arguments used in rejecting claim 1.

Applicant's independent claim 1 recites, besides other things, a computer-readable medium having a storage asset therein that includes a fourth data structure that stores patch data that includes modifications to the medical imaging information. As provided by the Applicant, and as recited in claim 1, the patch data that includes modifications to the medical imaging information:

> includes all modifications to medical imaging information 87B, which was originally generated by the source modality. In other words, the original data is not modified. Rather, the asset includes patch data 87E that stores all of the updated data and, in particular, a revision history including the date and time of the change, and operator that made the change. In other words, during the reconciliation process, patient manager 48 stores all updates and modifications of an asset within the patch data 87E of the exchange format 86. In this manner, exchange format 86 facilitates compliance with regulations that require change tracking and revision histories and furthermore, facilitates storages of the information within a single self-describing data asset. When a view station presents the data to an operator, patch data 87E overrides the medical imaging 87B. However, the operator may always view the revision history and the original medical imaging data 87B. (page 15, line 24 – page 16, line 5).

In contrast, Schnellinger provides "[t]he MIG [Medical Imaging Gateway] also provides for compression/expansion of data, communication control, temporary storage, and security/error checking" for medical images (Col. 5, lines 25-26), and that "Image Images can be captured (acquired from the source modality), stored (locally, or remotely) temporarily for a short time or archived for a long time), retrieved from local or remote storage, viewed, previewed, adjusted, manipulated, and composed" (Col. 11, lines 46-50). Schnellinger, however, does not teach or suggest what type of security/error checking takes place for the medical images in

the MIG. In addition, Schnellinger does not teach or suggest what is included when the "Image Images" are "viewed, previewed, adjusted, manipulated, and composed." In other words, Applicant is unable to find in Schnellinger where the "MIG" and/or the "Image Images" includes patch data having modifications to the medical imaging information that was originally generated by the source modality and a revision history including the date and time of a change, and the operator that made the change to the medical imaging information.

Rather, it would appear that Schnellinger is providing for adjusting, manipulating and composing the displayed image by changing the contrast, brightness and/or other settings of the display. This type of modification, however, is done by adjusting the display itself, and not the underlying image data. In addition, adjustments to the display are not saved and/or used to "fix" the underlying image data as these types of adjustments are display dependent. In other words, adjustments that provide for suitable image detail with a first display may not work with a second display, so this type of data is not stored and/or use to "fix" the underlying image data.

In the Final Office Action, dated March 3, 2006, the Examiner in responding to Applicant's argument asserted that "features upon which applicant argues features [*sic*] that are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 998 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)." (Final Office Action, page 5).

As the Examiner appreciates, during examination, the claims must be interpreted as broadly as their terms reasonably allow, however, the claims must be given their broadest reasonable interpretation consistent with the specification. This means that the words of the claim must be given their plain meaning unless applicant has provided a clear definition in the specification. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). It is only when the specification provides definitions for terms appearing in the claims that the specification can be used in interpreting claim language. In re Vogel, 422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970). In addition, an applicant is entitled to be his or her own

lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s). See In Re Paulsen, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994). Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. Toro Co. v. White Consolidated Industries Inc., 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999). Also, the specification should also be relied on for more than just explicit lexicography or clear disavowal of claim scope to determine the meaning of a claim term when applicant acts as his or her own lexicographer; the meaning of a particular claim term may be defined by implication, that is, according to the usage of the term in context in the specification. See Phillips v. AWH Corp., __F.3d__, 75 USPQ 2d 1321 (Fed. Cir. 2005) (en banc).

Applicant clearly recites the features upon which are relied upon in the claims. In addition, Applicant clearly defines and distinguishes the recited term "patch data" in the specification,

> Patch data 87E includes all modifications to medical imaging information 87B, which was originally generated by the source modality. In other words, the original data is not modified. Rather, the asset includes patch data 87E that stores all of the updated data and, in particular, a revision history including the date and time of the change, and operator that made the change. In other words, during the reconciliation process, patient manager 48 stores all updates and modifications of an asset within the patch data 87E of the exchange format 86. In this manner, exchange format 86 facilitates compliance with regulations that require change tracking and revision histories and furthermore, facilitates storages of the information within a single self-describing data asset. When a view station presents the data to an operator, patch data 87E overrides the medical imaging 87B. However, the operator may always view the revision history and the original medical imaging data 87B. (page 15, line 24 – page 16, line 5).

As discussed above, Applicant expressly recites the term "patch data" in the claims, where the term is clearly and expressly defined in the specification. This is in contrast to the facts in *In re Van Geuns* cited by the Examiner, in which Van

Geuns tried to limit the phrase "uniform magnetic field" of a magnetic assembly recited in the claim to that of an NMR or MRI apparatus among others generally provided in the specification. In other words, Van Geuns tried to limit the phrase recited in the claim by narrowly reading its meaning from a broader recitation in the specification. As such, *In re Van Geuns* is distinguished from the present case, since Applicant is not trying to limit the interpretation of the term "patch data" as defined in the specification, as was the case in *In re Van Geuns*.

As defined in the specification, the fourth data structure that stores patch data that includes modifications to the medical imaging information, as recited in claim 1, includes patch data that stores all of the updated data and a revision history including the date and time of the change and the operator that made the change. In contrast, Schnellinger provides "[t]he MIG [Medical Imaging Gateway] also provides for compression/expansion of data, communication control, temporary storage, and security/error checking" for medical images (Col. 5, lines 25-26). In addition, Schnellinger provides that "Image Images can be captured (acquired from the source modality), stored locally, or remotely) temporarily for a short time or archived for a long time), retrieved from local or remote storage, viewed, previewed, adjusted, manipulated, and composed" (Col. 11, lines 46-50).

Schnellinger, however, does not teach or suggest a fourth data structure that stores patch data that includes modifications to the medical imaging information as provided in claim 1, among other things. Rather, it appears that Schnellinger teaches that the medical image (Image Images) can be "viewed, previewed, adjusted, manipulated, and composed" but does not teach or suggest that the modifications to the medical images are stored. Therefore, the Applicant is unable to find in Schnellinger where the "MIG" and/or the "Image Images" include a data structure that stores patch data having modifications to the medical imaging information that was originally generated by the source modality and a revision history including the date and time of a change, and the operator that made the change to the medical imaging information.

In addition, as discussed above Schnellinger provides "[t]he MIG also provides for compression/expansion of data, communication control, temporary storage, and security/error checking" for medical images (Col. 5, lines 25-26). The MIG described by Schnellinger "provides a platform for the movement of diagnostic quality images at high speeds between different locations." (Col. 5, lines 13-15). Therefore, when Schnellinger refers to "security/error checking," Schnellinger is appearing to teach or suggest actions taking place before an image can be moved from the source of the medical image to the image display workstations and imaging networks. (Col. 5, lines 15-18). On the other hand, Schnellinger does not appear to teach or suggest the storage of any error found, and makes no mention of storing correction information. In fact, the MIG is not a storage structure at all, but is instead an "interface between the source of medical images (the image generators), image display workstations, and imaging networks." (Col. 5, lines 15-18). Therefore, Schnellinger does not teach or suggest a fifth data structure that stores error detection and correction information, as recited in claim 1, among other things.

As such, each and every element and limitation are not provided in the reference to support a §103 rejection of claim 1.

Applicant also respectfully submits that it appears that the Examiner is relying upon an inherency argument in rejecting claim 1 in asserting that "it is readily apparent that data structures for patch data and error detecting/correcting are necessary for carrying these functions" (page 4, Non-Final Office Action dated June 2005). As is appreciated, the express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. 102 or 103. However, "[t]he fact that a certain result or characteristic <u>may</u> occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." M.P.E.P. 2112, Sec. IV. Rather "[t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may

result from a given set of circumstances is not sufficient.'" M.P.E.P. 2112, Sec. IV. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." M.P.E.P. 2112, Sec. IV.

Applicant respectfully submits that the Examiner has not provided a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from Schnellinger. The Examiner asserts that the system of Schnellinger includes security and error checking function, and that image information can be previewed, adjusted, manipulated and composed. The Examiner then concluded that "it is readily apparent that data structures for patch data and error detecting/correcting are necessary for carrying these functions" (page 4, Non-Final Office Action dated June 3, 2005). As discussed above, however, these functions for the "patch data" include all modifications to medical imaging information that was originally generated by the source modality, including storing all of the updated data and, in particular, a revision history including the date and time of the change, and operator that made the change. Schnellinger does not teach or suggest this aspect of the "patch data." In addition, the Examiner has not provided objective evidence or cogent technical reasoning as to where and/or how Schnellinger provides support for the conclusion of inherency. Applicant respectfully requests either objective evidence or cogent technical reasoning as to where and/or how Schnellinger provides support for the conclusion of inherency.

Accordingly, reconsideration and withdrawal of the §103 rejection for independent claim 1 is respectfully requested.

Claim 2

As discussed above for claim 1, Schnellinger does not teach or suggest patch data having modifications to the medical imaging information, or a fifth data structure that stores error detection and correction information for a storage asset. As such, each and every element of independent claim 1 is not taught or suggested

in Schnellinger. As claim 2 is a dependent claim of independent claim 1, the §103 rejection of claim 2 should be withdrawn.

Claim 8

Applicant respectfully submits that Schnellinger does not support a proper prima facie case of obviousness for the rejection of claim 8. For example, Schnellinger does not teach or suggested all the elements recited in claim 8. Applicant's independent claim 8 recites, besides other things, a method that includes receiving a storage asset comprising: (i) asset meta information, (ii) original medical imaging information received from a medical imaging modality, and (iii) patch data that includes modifications to the medical imaging information. As discussed above for claim 1, Applicant is unable to find in Schnellinger a teaching or suggestion of patch data having modifications to the medical imaging information that was originally generated by the source modality and a revision history including the date and time of a change, and the operator that made the change to the medical imaging information. As such, each and every element and limitation are not provided in the reference to support a §103 rejection of claim 8.

In addition, the Examiner asserts that while Schnellinger "does not expressly recite the receiving of data structures that store patch data including modifications to the medical imaging information" Schnellinger does teach "on col. 11, lines 46-50 that image information can be stored, retrieved, previewed, adjusted, manipulated and composed." Based on this, the Examiner asserts that "it is readily apparent that the receiving of stored patch data including modifications to the medical imaging information is necessary for retrieving, adjusting, manipulating or composing the image information." (page 5, Non-Final Office Action June 3, 2005).

As with the rejection of claim 1, it appears that the Examiner is relying upon an inherency argument in rejecting claim 8. However, Applicant respectfully submits that the Examiner has not sufficiently supported the inherency argument relied upon in rejecting claim 8. For example, the Examiner has not provided a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from Schnellinger. Applicant

respectfully repeats the argument presented above for claim 1 in support of this position.

Accordingly, reconsideration and withdrawal of the §103 rejection for independent claim 8 are respectfully requested.

Claims 9 and 11-13

As discussed above for claim 8, Schnellinger does not teach or suggest patch data having modifications to the medical imaging information. As such, each and every element of independent claim 8 is not taught or suggested in Schnellinger. As claims 9 and 11-13 are dependent claims of independent claim 8, the §103 rejection of claims 9 and 11-13 should be withdrawn.

Claim 10

Applicant respectfully submits that Schnellinger does not support a proper prima facie case of obviousness for the rejection of claim 10. For example, as discussed above for claim 1, Schnellinger provides "[t]he MIG also provides for compression/expansion of data, communication control, temporary storage, and security/error checking" for medical images (Col. 5, lines 25-26). The MIG described by Schnellinger "provides a platform for the movement of diagnostic quality images at high speeds between different locations." (Col. 5, lines 13-15). Therefore, when Schnellinger refers to "security/error checking," Schnellinger is appearing to teach or suggest actions taking place before an image can be moved from the source of the medical image to the image display workstations and imaging networks. (Col. 5, lines 15-18).

On the other hand, Schnellinger does not appear to teach or suggest the storage of any error found, and makes no mention of storing correction information. In fact, the MIG is not a storage structure at all, but is instead an "interface between the source of medical images (the image generators), image display workstations, and imaging networks." (Col. 5, lines 15-18). Therefore, Schnellinger does not teach or suggest a storage asset that includes error detection and correction information, as recited in claim 10.

As such, each and every element and limitation are not provided in the reference to support a §103 rejection of claim 10.

Claim 18

Applicant respectfully submits that Schnellinger does not support a proper prima facie case of obviousness for the rejection of claim 18. For example, Schnellinger does not teach or suggested all the elements recited in claim 18. Applicant's independent claim 18 recites, besides other things, a router that includes a routing module to route a storage asset comprising: (i) asset meta information, (ii) original medical imaging information received from a medical imaging modality, and (iii) patch data that includes modifications to the medical imaging information. As discussed above for claim 1, Applicant is unable to find in Schnellinger a teaching or suggestion of patch data having modifications to the medical imaging information that was originally generated by the source modality and a revision history including the date and time of a change, and the operator that made the change to the medical imaging information. As such, each and every element and limitation are not provided in the reference to support a §103 rejection of claim 18.

In addition, the Examiner asserts that while Schnellinger "does not expressly recite the patch data including modifications to the medical imaging information" Schnellinger does teach "on col. 11, lines 46-50 that image information can be stored, retrieved, previewed, adjusted, manipulated and composed." Based on this, the Examiner asserts that "it is readily apparent that the receiving of stored patch data including modifications to the medical imaging information is necessary for retrieving, adjusting, manipulating or composing the image information." (pages 6-7, Office Action).

As with the rejection of claim 1, it appears that the Examiner is relying upon an inherency argument in rejecting claim 18. However, Applicant respectfully submits that the Examiner has not sufficiently supported the inherency argument relied upon in rejecting claim 18. For example, the Examiner has not provided a basis in fact and/or technical reasoning to reasonably support the determination that

the allegedly inherent characteristic necessarily flows from Schnellinger. Applicant respectfully repeats the argument presented above for claim 1 in support of this position.

Accordingly, reconsideration and withdrawal of the §103 rejection for independent claim 18.

Claim 19

As discussed above for claim 18, Schnellinger does not teach or suggest patch data having modifications to the medical imaging information. As such, each and every element of independent claim 18 is not taught or suggested in Schnellinger. As claim 19 is a dependent claim of independent claim 18, the §103 rejection of claim 19 should be withdrawn.

Based on the forgoing, reconsideration and withdrawal of the §103 rejection for claims 1, 2, 8-13, 18 and 19 is respectfully requested.

Claim 3 and 17

Claims 3 and 17 were rejected under 35 USC § 103(a) as being unpatentable over Schnellinger as applied to claims 1, 12 above and further in view of Pourjavid. Applicant respectfully traverses the rejection of claims 3 and 17.

Claim 3

As for claim 3, the Examiner cited Pourjavid to illustrate DICOM communication protocol standards. Pourjavid, however, does not cure the above identified deficiencies of Schnellinger insofar as Schnellinger does not teach or suggest, besides other things, a storage asset that includes patch data that includes modifications to the medical imaging information. As such, each and every element of independent claim 1 is not taught or suggested in Schnellinger and Pourjavid, either independently or in combination. As claim 3 is a dependent claim of independent claim 1, the §103 rejection of claim 3 should be withdrawn.

Claim 17

As for claim 17, the Examiner cited Pourjavid to illustrate an image transmission system with image correction. Pourjavid, however, does not cure the above identified deficiencies of Schnellinger insofar as Schnellinger does not teach or suggest, besides other things, a storage asset that includes patch data that includes modifications to the medical imaging information. As such, each and every element of independent claim 8 is not taught or suggested in Schnellinger and Pourjavid, either independently or in combination. As claim 17 is a dependent claim of independent claim 8, the §103 rejection of claim 17 should be withdrawn.

Based on the forgoing, reconsideration and withdrawal of the §103 rejection for claims 3 and 17 is respectfully requested.

Claims 6 and 16

Claims 6 and 16 were rejected under 35 USC § 103(a) as being unpatentable over Schnellinger as applied to claims 1, 12 above and further in view of De La Huerga (U.S. Publication No. 2002/0116509). Applicant respectfully traverses the rejection of claims 6 and 16.

For claims 6 and 16, the Examiner cited DeLaHuerga to illustrate at least a time stamp. DeLaHuerga, however, does not cure the above identified deficiencies of Schnellinger insofar as Schnellinger does not teach or suggest, besides other things, a storage asset that includes patch data that includes modifications to the medical imaging information. As such, each and every element of independent claims 1 and 8 is not taught or suggested in Schnellinger and DeLaHuerga, either independently or in combination. As claim 6 is a dependent claim of independent claim 1 and claim 16 is a dependent claim of independent claim 8, the §103 rejection of claims 6 and 16 should be withdrawn.

Based on the forgoing, reconsideration and withdrawal of the §103 rejection for claims 6 and 16 is respectfully requested.

Claims 4, 5, 14, 15

Claims 4, 5, 14 and 15 were rejected under 35 USC § 103(a) as being unpatentable over Schnellinger as applied to claims 1, 11 above and further in view of Zandi et al (U.S. Patent No. 6,195,465). Applicant respectfully traverses the rejection of claims 4, 5, 14 and 15.

Claims 4 and 5

For claims 4, 5, the Examiner cited Zandi, to illustrate a compression and decompression system. Zandi, however, does not cure the above identified deficiencies of Schnellinger insofar as Schnellinger does not teach or suggest, besides other things, a storage asset that includes patch data that includes modifications to the medical imaging information. As such, each and every element of independent claim 1 is not taught or suggested in Schnellinger and Zandi, either independently or in combination. As claims 4 and 5 are dependent claims of independent claim 1, the §103 rejection of claims 4 and 5 should be withdrawn.

Claims 14 and 15

For claims 14, 15, the Examiner cited Zandi, to illustrate a compression and decompression system. Zandi, however, does not cure the above identified deficiencies of Schnellinger insofar as Schnellinger does not teach or suggest, besides other things, a storage asset that includes patch data that includes modifications to the medical imaging information. As such, each and every element of independent claim 8 is not taught or suggested in Schnellinger and Zandi, either independently or in combination. As claims 14 and 15 are dependent claims of independent claim 8, the §103 rejection of claims 14 and 15 should be withdrawn.

Based on the forgoing, reconsideration and withdrawal of the §103 rejection for claims 4, 5, 14 and 15 is respectfully requested.

Claim 7

Claim 7 was rejected under 35 USC § 103(a) as being unpatentable over Schnellinger as applied to claims 1, 12 above and further in view of Booth et al (U.S. Patent No. 6,065,073). Applicant respectfully traverses the rejection of claim 7.

For claim 7, the Examiner cited Booth to illustrate at least a cyclical redundancy check. Booth, however, does not cure the above identified deficiencies of Schnellinger insofar as Schnellinger does not teach or suggest, besides other things, a storage asset that includes patch data that includes modifications to the medical imaging information. As such, each and every element of independent claim 1 is not taught or suggested in Schnellinger and Booth, either independently or in combination. As claim 7 is a dependent claim of independent claim 1, the §103 rejection of claim 7 should be withdrawn.

Based on the forgoing, reconsideration and withdrawal of the §103 rejection for claim 7 is respectfully requested.

The Examiner is invited to telephone Applicant's attorney, Joseph C. Huebsch, at (612) 236-0122 with regard to this matter.

CERTIFICATE UNDER 37 C.F.R. §1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: **MS APPEAL BRIEF-PATENTS** Commissioner for Patents, P.O. BOX 1450, Alexandria, VA 22313-1450, on this 12th day of September 2006.

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VIII. CLAIMS APPENDIX

The Claims on Appeal

1. (Original) A computer-readable medium having a storage asset therein comprising:

a first data structure that stores asset meta information to control routing of the asset through a medical imaging network;

a second data structure that stores medical imaging information received from a medical imaging modality;

a third data structure that stores pixel data received from the medical imaging modality;

a fourth data structure that stores patch data that includes modifications to the medical imaging information; and

a fifth data structure that stores error detection and correction information.

2. (Original) The computer-readable medium of claim 1, wherein the medical imaging information includes patient information, session information, study information and image information.

3. (Previously Presented) The computer-readable medium of claim 1, wherein the medical imaging information includes Digital Imaging and Communications in Medicine (DICOM) tags and messages.

4. (Original) The computer-readable medium of claim 1, a fourth data structure that stores thumbnail data generated from the pixel data.

5. (Original) The computer-readable medium of claim 4, wherein the thumbnail data includes a low-resolution version of the pixel data and is generated by a router within the medical imaging network.

6. (Original) The computer-readable medium of claim 1, wherein the patch data includes, for each modification, a revision history having a date, a time, and an operator associated the respective modification.

7. (Previously Presented) The computer-readable medium of claim 1, wherein the error detection and correction information comprises a cyclical redundancy check (CRC).

8. (Previously Presented) A method comprising:

storing routing information mapping destinations to routes within a network;

receiving a storage asset comprising: (i) asset meta information, (ii) original medical imaging information received from a medical imaging modality, and (iii) patch data that includes modifications to the medical imaging information;

selecting a route from the routing information based on the asset meta information; and

forwarding the storage asset according to the selected route.

9. (Original) The method of claim 8, wherein the storage asset further comprises pixel data received from the medical imaging modality.

10. (Original) The method of claim 8, wherein the storage asset further comprises error detection and correction information.

11 (Previously Presented) The method of claim 8, further comprising:

storing a set of routing rules;

comparing a portion of the medical imaging data or a portion of the patch data to the set of routing rules; and

selecting the route from the routing information based at least on a result of the comparison.

12. (Previously Presented) The method of claim 8, wherein the asset meta information comprises a target Application Entity Name (AEName), and further wherein storing routing information comprises storing routing information mapping AENames to routes within the medical imaging network.

13. (Previously Presented) The method of claim 12, wherein selecting a route from the routing information comprises comparing an AEName within the storage to the AEName within the routing information.

14. (Original) The method of claim 11, wherein the storage asset further comprises thumbnail data generated from the pixel data.

15. (Original) The method of claim 11, wherein the thumbnail data includes a low-resolution version of the pixel data and is generated by a router within the medical imaging network.

16. (Original) The method of claim 11, wherein the patch data includes, for each modification, a revision history having a date, a time, and an operator associated the respective modification.

17. (Previously Presented) The method of claim 12, further including:

updating the medical imaging information based on the patch data to form a corrected medical imaging information; and

displaying the corrected medical imaging information on a diagnostic view station.

18. (Previously Presented) A router comprising:

a computer-readable medium storing routing information mapping destinations to routes within a medical imaging network; and

a routing module to route a storage asset comprising: (i) asset meta

information, (ii) original medical imaging information received from a medical imaging modality, and (iii) patch data that includes modifications to the medical imaging information, wherein the routing module selects a route based on the asset meta information and the routing information.

19. (Previously Presented) The router of claim 18, wherein the asset meta information comprises a target Application Entity Name (AEName), and further wherein the routing information maps AENames to routes within the medical imaging network.

IX. EVIDENCE APPENDIX

No evidence is submitted.

X. RELATED PROCEEDINGS APPENDIX

As there are no appeals or interferences known to Appellant's Representatives which will directly affect, be directly affected by, or have a bearing on the Board's decision in the pending appeal. There are no decisions rendered by a court or the Board to submit.